

NATIONAL CONNECTIVITY COMPARISONS

Connectivity Charts showing direct intercity links offered by:

- Existing intercity network (Figure A1);
- HS2, Northern Powerhouse Rail (NPR) & Midlands Rail Hub (MRH) superimposed onto existing intercity network (Figure A2);
- HS2, NPR, MRH & existing network, allowing for likely reductions in existing intercity services (Figure A3);
- HSUK superseding existing intercity network (Figure A4).

The following 18 principal cities are considered, each representing *major UK conurbations*:

London	<i>Greater London</i>	Liverpool	<i>Merseyside</i>
Milton Keynes	<i>M1 Corridor</i>	Leeds	<i>West Yorkshire</i>
Birmingham	<i>West Midlands</i>	Darlington	<i>Teesside</i>
Leicester	<i>East Midlands</i>	Newcastle	<i>Tyne & Wear</i>
Nottingham	<i>East Midlands</i>	Edinburgh	<i>Lothian</i>
Derby	<i>East Midlands</i>	Glasgow	<i>Strathclyde</i>
Stoke	<i>Potteries</i>	Cardiff	<i>South Wales</i>
Sheffield	<i>South Yorkshire</i>	Bristol	<i>Avon</i>
Manchester	<i>Gr. Manchester</i>	Cardiff	<i>South Wales</i>

Analysis is based upon:

- Existing intercity timetable, see www.nationalrail.co.uk
- Predicted HS2 intercity services, see Annex B : Modelled train service spec, *High Speed Two Phase 2b, Strategic Outline Business Case* (2016)
- Potential intercity service reductions with HS2 in place, see Table 23, pp91-92, *HS2 Regional Economic Impacts* (2013)
- Demonstrator timetable developed for HSUK national network, see www.highspeeduk.co.uk

Each chart shows the available direct links between 18 principal cities which represent the major conurbations of the UK; it also ranks each link by the quality of the train and by the frequency, with all sub-hourly services specifically identified.

Note that 'out of town' parkway stations such as the proposed HS2 East Midlands Interchange at Toton are not accepted as direct intercity services to either Nottingham, Derby or Leicester.

Greater London	London	LO																			3	T	High quality 2-hourly link		
M1 Corridor	Milton Keynes		MK																			6		High quality	Direct hourly intercity link - halve score for 2-hourly link
West Midlands	Birmingham			BI																		4		Medium quality	
East Midlands	Leicester				LE																	2		Low quality	
East Midlands	Nottingham					NG																0		No direct intercity link	
East Midlands	Derby						DE																		
Potteries	Stoke							ST																	
South Yorkshire	Sheffield								SH																
Gr. Manchester	Manchester									MA															
Merseyside	Liverpool										LI														
West Yorkshire	Leeds											LS													
Humberside	Hull												HU												
Teesside	Darlington													DL											
Tyne & Wear	Newcastle														NE										
Lothian	Edinburgh															EH									
Strathclyde	Glasgow																GL								
South Wales	Cardiff																	CF							
Avon	Bristol																							BS	
Conurbation	City	LO	MK	BI	LE	NG	DE	ST	SH	MA	LI	LS	HU	DL	NE	EH	GL	CF	BS						
No of Direct Links		17	6	16	5	9	13	6	14	15	8	13	4	11	11	11	10	6	11						
Connectivity Score		96	30	68	28	32	54	28	54	60	30	50	13	48	48	47	26	24	44						

Figure A1 : Direct Intercity Connectivity offered by Existing Intercity Network

London	LO																					1-3	T	Existing 2-hourly link
Milton Keynes		MK																				2-6		Existing hourly link
Birmingham			BI																			0		No direct intercity link
Leicester				LE																		6		MRH direct intercity link
Nottingham					NG																	6		HS2 direct intercity link
Derby						DE																6		NPR direct intercity link
Stoke							ST																	
Sheffield								SH																
Manchester									MA															
Liverpool										LI														
Leeds											LS													
Hull												HU												
Darlington													DL											
Newcastle														NE										
Edinburgh															EH									
Glasgow																GL								
Cardiff																	CF							
Bristol																		BS						
	LO	MK	BI	LE	NG	DE	ST	SH	MA	LI	LS	HU	DL	NE	EH	GL	CF	BS						
No of Direct Links	17	6	16	5	9	13	6	14	15	9	13	5	11	11	11	10	6	11						
Connectivity Score	99	30	82	30	36	58	28	72	74	48	64	27	58	58	46	28	24	44						

Figure A2 : Direct Intercity Connectivity offered by HS2 (full 'Y-network'), Northern Powerhouse Rail (NPR) and Midlands Rail Hub (MRH), superimposed onto connectivity of Existing Intercity Network

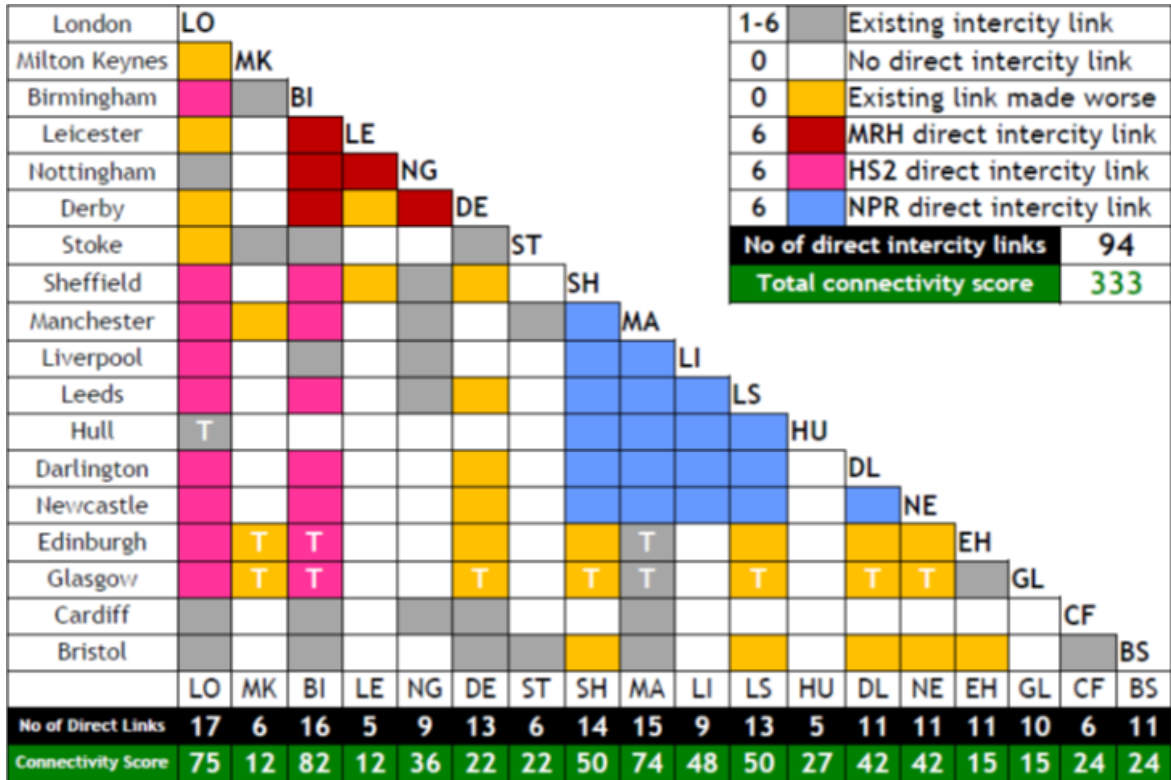


Figure A3 : Direct Intercity Connectivity offered by HS2 (full ‘Y-network’), NPR, MRH and Existing Intercity Network, with due allowance for predicted service reductions on existing network

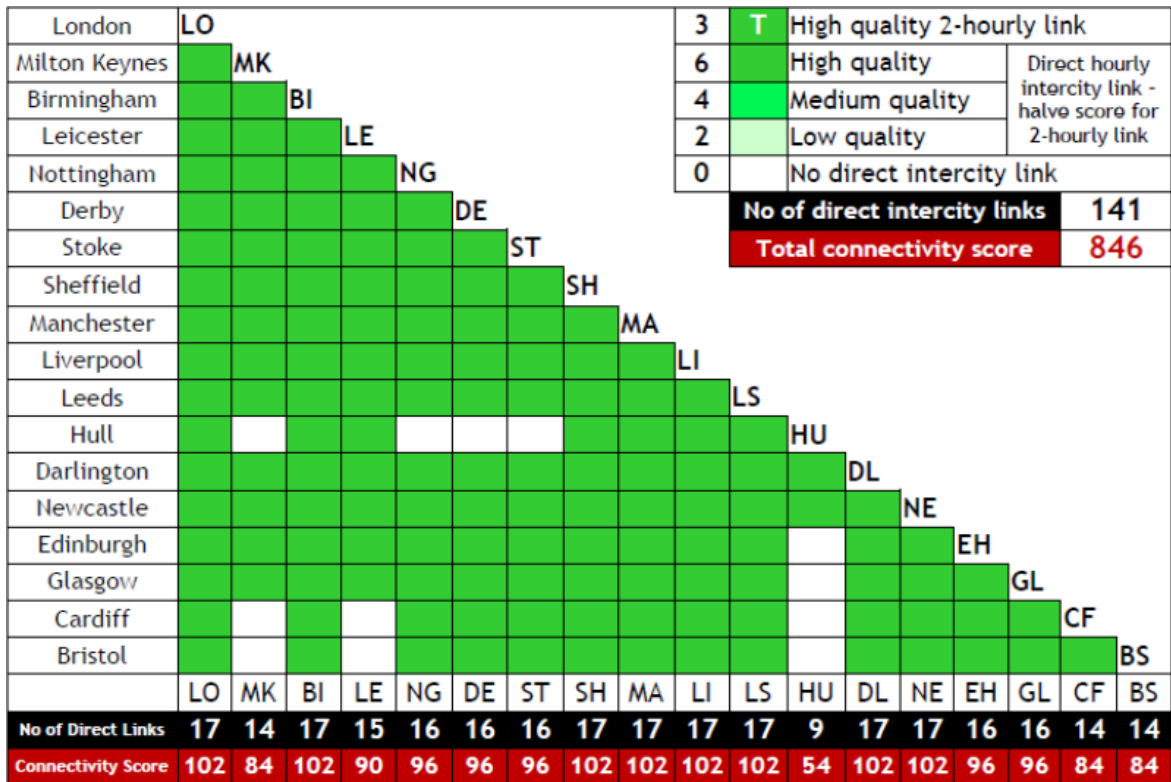


Figure A4 : Direct Intercity Connectivity offered by HSUK Network

